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INSTRUCTIONS FOR VACCINE INOCULATION.

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LET the vaccine fluid be taken, for the purpoſe of Inoculation, from a puſtule that is making its progreſs regularly, and which poſſeſſes the true vaccine character, on any day from the fifth to the eighth, or even a day or two later, provided the effloreſcence be not then formed around it. When the effloreſcence is formed, it is always moſt prudent to deſiſt from taking any more of the virus from that puſtule.

To obtain the virus, let the edges of the puſtule be gently punctured with a lancet in ſeveral points. It will gradually ooze out, and ſhould be inſerted upon the arm about midway between the ſhoulder and the elbow, either by means of a very ſlight ſcratch, not exceeding the eighth part of an inch, or a very ſmall oblique puncture.

A little red ſpot will appear on the punctured part on the third day, if the operation ſucceed, which on the fourth or fifth becomes perceptibly veſicated. It goes on increaſing till the tenth day, when it is generally ſurrounded by a roſe-coloured effloreſcence, which remains nearly ſtationary for a day or two. The effloreſcence then fades away, and the puſtule is gradually converted into a hard gloſſy ſcab, of a dark mahogany colour. Theſe progreſſive ſtages of the puſtule are commonly completed in ſixteen or ſeventeen days.

A ſingle puſtule is ſufficient to ſecure the conſtitution from the ſmall-pox; but as we are not always certain the puncture may take effect, it will be prudent to inoculate in both arms, or to make two punctures in the ſame arm, about an inch and a half aſunder, except in very early infancy, when there is a great ſuſceptibility of local irritation.

If the effloreſcence ſurrounding the puſtule ſhould be extenſive, and occaſion much local heat upon the arm, it may be cooled by the repeated application of pieces of folded linen dipped in cold water; or ſtill more expeditiouſly by a ſtrong ſolution of the *aqua lythargyri acetati** in water; an ounce, for example, of the former in five or ſix of the latter.

If the ſcab ſhould at any time be prematurely rubbed off, and not ſucceeded by another within twenty-four hours, the part may be occaſionally touched with the undiluted *aqua lythargyri acetati.*

Vaccine virus, taken from a puſtule, and inſerted immediately in its fluid ſtate, is preferable to that which has been previouſly dried; but as it is not always practicable to obtain it in this ſtate, we are compelled to ſeek for ſome mode of preſerving it. Various means have been ſuggeſted, but from the teſt of long experience it may be aſſerted, that preſerving it between two plates of glaſs is the moſt eligible. Let a piece of common window glaſs be cut into ſquares of about an inch each, ſo that they ſhall lie ſmooth when placed upon each other. Let the collected vaccine fluid be confined to a ſmall ſpot (about the ſize of a ſplit pea) upon the centre of one of theſe glaſſes; which ſhould be ſuffered to dry in the common heat of the atmoſphere, without expoſure to the heat of fire or the ſun. When dry, it ſhould be immediately ſecured by placing over it the other piece of glaſs. Nothing more is neceſſary for its preſervation than wrapping it in clean writing paper.

The virus, thus preſerved, when wanted for the purpoſe of inoculation, may eaſily be reſtored to its fluid ſtate by diſſolving it in a ſmall portion of cold water, taken up on the point of a lancet. It may then be uſed in the ſame manner as when juſt taken from a puſtule.

The vaccine fluid is liable, from cauſes apparently trifling, to undergo a decompoſition. In this ſtate it ſometimes produces what has been denominated the ſpurious puſtule; that is, a puſtule, or an appearance on the arm not poſſeſſing the characteriſtic marks of the genuine puſtule. Anomalies, aſſuming different forms, may be excited, according to the qualities of the virus applied, or the ſtate of the perſon inoculated; but by far the moſt frequent variety, or deviation from the perfect puſtule, is that which arrives at maturity, and finiſhes its progreſs much within the time limited by the true. Its commencement is marked by a troubleſome itching; and it throws out a premature effloreſcence, ſometimes extenſive, but ſeldom circumſcribed, or of ſo vivid a tint as that which ſurrounds the puſtule completely organized; and (which is more characteriſtic of its degeneracy than the other ſymptoms) it appears more like a common feſtering produced by a thorn, or any other ſmall extraneous body ſticking in the ſkin, than a puſtule excited by the vaccine virus. It is generally of a ſtraw colour; and when punctured, inſtead of that colourleſs, tranſparent fluid of the perfect puſtule, its contents are found to be opaque. That deviation from the common character of the puſtule, ariſing from vaccine virus which has been previouſly expoſed to a degree of heat capable of decompoſing it, is very different. In this inſtance, it begins with a creeping ſcab, of a pale brown or amber colour; making a long and ſlow progreſs, and ſometimes going through its courſe without any perceptible effloreſcence. Its edges are commonly elevated, and afford, on being punctured, a limpid fluid.

A little practice in vaccine inoculation, attentively conducted, impreſſes on the mind the perfect character of the vaccine puſtule; therefore, when a deviation ariſes, of whatever kind it may be, common prudence points out the neceſſity of re-inoculation, firſt, with vaccine virus of the moſt active kind, and ſecondly, ſhould this be ineffectual, with variolous virus. But if the conſtitution ſhews an inſuſceptibility of one, it commonly does of the other.

When any conſtitutional ſymptoms occur in inoculated Cow-pox, they are commonly firſt perceptible (eſpecially in children) on the fourth or fifth day. They appear again, and ſometimes in adults, not unlike a mild attack from inoculated ſmall-pox, on the eighth, ninth, or tenth day. The former ariſe from the general effects of the virus on the habit, the latter from the irritation of the puſtule.

If the effluvia of the ſmall-pox have been received into the habit previouſly to the inoculation of the vaccine virus, the vaccine inoculation will not always be found to ſtop its progreſs, although the puſtule may make its advances without interruption.

The lancet uſed for inoculation ſhould always be perfectly clean. After each puncture, it is proper to dip it into water, and wipe it dry. The Practitioner ſhould be particularly cautious in obſerving that its point be free from ruſt, either contracted by common means, or from the action of the vaccine virus, which, even when dry and in contact with it, has a tendency, in a little time, to produce it.

The preſervation of vaccine virus upon a lancet, beyond the period of a few days, ſhould never be attempted; as it is ſo apt to produce ruſt, which will decompoſe it.

* Goulard's extract of saturn.

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